FTS-USACE

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C. Gillette — Okay, folks, this is Connie Gillette from the Corps of Engineers. Thanks for your patience as we got this set up. We are ready to start. The first thing that's going to happen is I'd like to have the Corps of Engineers spokespersons identify themselves and give you their title; I know you all need that. General Strock is going to make a statement, and after that we'll take your questions. As you ask a question, could you please identify yourself by your name and your organization? Thank you.

Coordinator — Welcome to today's teleconference. All lines will be interactive during today's call. This conference is being recorded. I will now turn the meeting over to today's host, and you may begin when you're ready.

C. Strock — All right, let me try that again. This is Lieutenant General Carl A. Strock. I'm the Chief of Engineers, the U.S. Army Corps of Engineers. Others on the video, go ahead and take over.

C. Gillette — John, can you have your folks identify themselves?

J. Rickey — Yes, I'll go first. It's John Rickey. I'm a Chief of Public Affairs, Mississippi Valley Division. I have with me Walter Baumy. Walter, let's go around the table; you start.

W. Baumy — Walter Baumy, Chief Engineering, New Orleans District, U.S. Army Corps of Engineers.

A. Naomi — I'm Al Naomi, Senior Project Manager for the New Orleans District Corps of Engineers.

C. Gillette — Do we have any other Corps of Engineers subject matter experts on the line?

G. Breerwood — This is Greg Breerwood. I'm the Deputy District Engineer for Project Management.

C. Gillette — Thank you. Anybody from Memphis?

B. Anderson Bob Anderson and Jim Hogue, Public Affairs Office.

C. Gillette With that, I'm going to turn it over to General Strock.

C. Strock Good afternoon and thanks for joining us here today. What I'd like to do is just give you an update on what we're doing; some background on the history of the flood control efforts in the New Orleans area; and then open it up to any questions you might have. Let me start with the role of the Corps of Engineers in response to this disaster.

We're really responding in three ways. Our main effort is through the Federal Emergency Management Agency, FEMA. We essentially provide whatever they need in the area of public works to respond to and recover from disasters. All of the efforts and the missions we've been given are in place and ready; these include provisions of ice, water, temporary power, temporary housing and roofing; and then whatever else is necessarily in public works infrastructure.

The next thing we do is, through our own authorities as the U.S. Army Corps of Engineers, we have the responsibility to conduct flood fighting and open navigation channels after an event like this. And our final role is

in support of Joint Task Force Katrina, which is a Department of Defense task force set up; and I have a small element moving forward now to link into that task force, to ensure that the Corps of Engineers is providing all the support necessary to the responders in the task force, and then to those that they are serving.

What I'd like to do to begin with is talk about what's going on in New Orleans, because I know that's on everyone's mind. What we're doing right now, the immediate focus is stopping the flow of water into the city. What we're doing is looking at various ways to do this; it's been a very challenging effort because first of all, we could not even get in to assess the problems, because we too are victims in this situation. Understanding the problem, then, it's been difficult to get access to the site; the only practical access is by air, because the site is completely surrounded by water.

The third is to find, once we develop a solution, to get the materials, the equipment and the personnel mobilized and in place; and again, in the path of a disaster, making those things happen is a very difficult thing. So we're facing some significant challenges.

What we have settled on as a first approach is an aerial approach where we're trying to put material into the breach, stop the flow of water. We're working parallel solutions to build a causeway to get out to the site, to do it from the ground; and we're also looking at options from the water, to stanch the flow of water either directly at the site or at a point where the water flows to the site. … many different approaches to this. Again, our real focus right now is getting the water stopped so that then we can get on to the business of draining the city and creating the conditions for the recovery operations to begin to take place.

There's been a lot of discussions about a number of aspects of this event. I'd like to talk about a few of those, and then certainly we'll open for further discussion afterwards. The first has to do with some suggestion that had the New Orleans flood project efforts been fully funded and in place by now, that this would not have happened; and it is my personal and professional assessment that that is not the case. In fact, the levee failures we saw were in areas of the projects that were at their final configuration; they were at full project design and were not really going to be further improved. So that part of the project was in place, and had this project been fully complete, and that's the Southeastern Louisiana Project which has to do with drainage and levee protection of the city, it's the

West Bank projects on the western side of the city across the Mississippi River, and it's the projects around the Lake Pontchartrain shoreline. Had all those been in place, it's my opinion, based on the intensity of this storm, that the flooding of the central business district and the French Quarter would still have occurred. So I do not see that the level of funding is really a contributing factor in this case.

The next question that we have seen raised is the adequacy of protection of the City of New Orleans. I'd like to talk a bit about how we determined what level of protection is appropriate. It's a very complex process. It involves the interaction of a lot of people from the local, state, national level. We identify the level of risk that a given area faces. We do an engineering and economic analysis and we come to an optimum solution and make a recommendation for a level of protection.

The project we're talking about here that has failed is an element of the Lake Pontchartrain project, and in its early design stages it was meant to provide protection from a two- or three-hundred-year event that might strike the city; so we were looking at a very low-probability event and we designed with that in mind. We looked at the intensity of the storm associated with that, and when you back that out of that approach, what

that equates to is about a Category 3 level of protection. But again, that recognizes that anything above Category 3 has a very, very low probability of occurring. Unfortunately, that event has occurred in this case.

Having said that, we continue to look at the adequacy of levels of protection, because these levels change over time. As development occurs, as natural processes take place, what was once a given level of protection can degrade over time, so we're in the constant process of evaluating that; and we have begun, at an informal level in the New Orleans District to look at the possibility and feasibility of going to a Cat 4 or Cat 5 level of protection. Again, I'd be happy to discuss that further, later on.

To sum up, we feel that we had achieved the appropriate level. Let me also state that it was fully recognized by the officials in this situation that we did have a Category 3 level of protection, and as the predictions of landfall at the Category 4 and 5 levels began to flow, a decision was made to evacuate the city. So that is exactly how this process was intended to work. When it was recognized by the public officials that the level of protection afforded by these projects would likely be exceeded, the right

thing to do at that time was to evacuate the city. That was done about as effectively as it could have been done.

Let me also address the issue of the general impact of the war in Iraq on civil works funding. We've seen some suggestions that our budget has been affected by the war. I can also say that I do not see that to be the case. If you look at the historical levels of funding for the Corps of Engineers from the pre-war levels back to 1992, '91, before we actually got into this, you'll see that the level of funding has been fairly stable throughout that period. So I think we would see that our funding levels would have dropped off if that were the case; so I do not see that as an issue that is relevant to the discussion of the flood protection of the City of New Orleans.

There are also some discussions that are being raised about the long-term aspects of what's going on in the Louisiana coastal area, and the contribution of that to this event. Again, we recognize that, and this administration and the Corps of Engineers, working with the State of Louisiana and the parishes that are affected have been working for many years to try to quantify the problem and then put things in place. In fact today, the first down payment of a $2 billion program that addresses this

problem is moving through Congress for solution. So we recognize that we must do something to reverse the processes of the degradation of the coastal areas.

Again, my assessment in this case is that any loss of wetlands in the barrier islands associated with those processes did not have a significant impact on this event. I say this because the storm track took it east of the City of New Orleans, and most of those barrier islands and marshlands are located to the south and west of the city; so the storm did not track through that direction anyway, and I don't think that that was a contributing factor in the situation.

We also are seeing some suggestion that this loss of wetlands has something to do with lack of regulatory vigor on the part of the Corps of Engineers and other agencies. Again, I would say that that is – I would reject that premise, because the processes we see here are more natural. Obviously there are some impacts as a result of what we have done, but it's really some natural processes, the force of nature, that's causing this; it's not development and filling in of wetlands as might be implied.

Finally, we're getting some queries about the effect of climate change, global warming, however you want to describe it, on the likelihood and intensity of hurricane activity in the Gulf. I will tell you that that is not something that I'm an expert on; that I would ask you to discuss that with Noah, with the weather people who can really give a better answer on that. But we certainly are interested in that.

Let me just sum up by saying that we deeply regret the loss of life associated with this. We are committed to doing whatever we can right now to stop the flow of waters and to get the city on the road to recovery. Let me underscore again that the Corps of Engineers and the administration and Congress have invested over $300 million since 2002 in storm and flood protection for the City of New Orleans. We were just caught by a storm of an intensity which exceeded the design of the projects we have in place.

With that, I'll conclude, and we're going to turn it over for any statements from the other Corps of Engineers folks down in the area, or –

C. Gillette Actually, we weren't planning on having anybody else make a statement right now, but I would like to tell you that John Basham, the Chief of

Engineering and Construction for the Corps of Engineers, has also joined us. With that, I'd like to thank you, General Strock, and I'd like to open it up for questions. If you would, please identify yourself; say your name and your title.

A. Revken Andy Revken, *New York Times*. Lieutenant General, hello?

C. Strock Hello, Andy, yes, I've got you. Go ahead.

A. Revken Can you give us a sense of timing on when initially that calculation was made that a Category 3 storm was a one in 200 or a 300-year event, and/or how many re-analyses were there since that point of the risk – the probability of this kind of storm?

C. Strock It's a very difficult question to answer, Andy. What I can tell you is that the documents that I've seen go back at least 25 years, that said that was the design criteria at the time. Let me point out here – and I don't want to get too technical and too belabored on this – but the actual way we did this is we did a probability analysis of the type of storm we might see come ashore in New Orleans. We assessed the risk, and did an engineering and economic analysis; and that led to the design of these protective structures.

It was after that fact that this model of categorizing storm strength came into being, so no one at the beginning said, "Well, let's just do Category 3." We designed it based on what we saw to be the risk of the event; and after the fact, we said, "So what would that relate to in terms of these category characterizations?" And the answer was Category 3.

A. Revken Just quickly, when you have a system where one tiny breach can – it's an all-or-nothing game, it seems like, with 350 miles of levee. So is there any added responsibility to not think in terms of one- and two-hundred-year events, and just think in terms of, well, there was Camille in 1969; therefore, this is a possibility. So why not take it to the max? That's one thing a lot of people are trying to figure out.

C. Strock If you refer to Camille, Camille did not have the same level of impact on the city as this –

A. Revken No, no; but it was a few dozen miles different and it would have. That's the whole idea.

C. Strock But that's part of the probability. As we talk about this site-specific flood protection, it's the probability of that event coming ashore at this point along the Gulf. That's an element of the probability. It's not the probability that there will be a Category 4 or 5 storm.

I know we need to move on here, but let me just also – I kind of bumped off that. Okay, let's go ahead and move on. I'm sorry, Andy.

W Yes; Lieutenant General, can you talk a little bit about the time line? I mean, how long is it going to take for you to stop the floodwaters? And then can you talk about how long it will take to pump out the city, and sort of give us a sense of how this rescue mission is going to occur, in terms of days and weeks?

C. Strock Let me just start out, and then I'll turn it over to the people who really know the answers to those questions, or have a better way to talk about that. First of all, two things are happening here: one is, we're working very, very hard to actually stop the flow of water. We're trying to do that, as I mentioned, from the air, from the land and from the water – any way we can. And I'll let the folks on the ground talk more about that.

The second is to recognize that there are natural processes. The basic problem here is that Lake Pontchartrain, through the flood surge, had a significant raise in its water level, and the canal where this levee breached normally feeds by gravity, feeds into the lake. So when the lake level rises, you put pressure on the levee and through the storm surge and so on; this area failed.

So what we're also looking at now is a – as the lake begins to recede, at some point it will drop back to its normal level, and we should see the flows reverse. First, stabilize, and we're very close to that as I understand it now, and then reverse, so that actually the breach in the levee helps us to drain the city. With that, I'll turn it over to the folks down in New Orleans to talk in more detail about the specific responses and coverage.

C. Gillette Again, please do identify yourselves before you speak.

J. McCoit This is John McCoit from *The Times Picayune*. I had another question on the first point for the General, which is that in retrospect, you came to the conclusion that a level of protection that we had, with some improvement, was adequate. In retrospect was that incorrect, given that the cost benefits in this situation – obviously the costs are going to be astronomical.

C. Strock I'm sorry, would you say that again? I thought it was a response from the folks down…. So please say that again.

J. McCoit My question was –

C. Strock And then who am I speaking with?

J. McCoit This is John McCoit from *The Times Picayune*. My question was, was your analysis, in retrospect, incorrect? Cost versus benefit, the costs here are astronomical.

C. Strock That's a very difficult question for me to answer, because I don't know what the cost of going to a Category 4 or level 5 protection would be; and I really don't know – obviously there's a very significant cost associated, so I don't know. That's something we'll have to sort of look at. Let me see if anyone in the New Orleans District would like to respond to that.

M Al Naomi should talk about that; he said $2.5 billion yesterday.

P. Carey Yes. You've issued a press release just in May that said there were seven contracts that were being delayed due to lack of funds, and yet you said that there's no connection between that and the failure of these projects; but some of these projects were like 60% done, 70% done, 90% done, and some of them are in the areas where there were failures; isn't that correct? Again, I'm Pete Carey with Knight-Ridder.

A. Naomi This is Al Naomi in New Orleans. If you want me to answer that question, I can. The contracts –

P. Carey Give me your name again?

A. Naomi -- that were delayed were not in the areas of the failures. The contracts that were delayed have not contributed to the flooding of the city. We were trying to do work on raising levees in Jefferson and St. Charles Parish and other parishes, but the failures occurred because – based on failures of areas of protection that had been finished for many years and were adequately designed for the level of protection that we were authorized to provide. So this storm was far greater than what we were authorized to provide. So the design was fine for a Category 3 or less. We had much greater than Category 3; therefore, the design was not

adequate to protect against a storm of this nature because we were not authorized to provide a Category 4 or 5 protection design.

A. Carnes Mr. Naomi, this is Ann Carnes with *The Wall Street Journal*. Authorized by who, or what agency?

C. Strock Let me take that one; this is General Strock again. The process of authorization I sort of sketched out early on in this. It is recognizing that there is a hazard, and clearly there is one in New Orleans, and this goes back many, many years. The process involves the local officials down at the city and parish levels working with the state and the federal agencies involved, and then moving up through the administration to Congress. So the final commitment to a given level of protection is really a national decision –

A. Carnes Meaning Congressional approval, or agency approval? Can you just be specific? When he says "authorized" –

C. Strock Yes, I'm sorry. The authorization actually occurs from Congressional authorization. We recommend a project and a given approach. That goes through the administration to Congress, and then Congress, through the

House and Senate Energy and Water Committee – I'm sorry, through the Infrastructure Committees – will authorization the construction of that project at a given funding level; and then the Appropriations Committee will determine how much money to put against that. Mr. Naomi's point was that this project was authorized to provide effectively level 3 or a Category 3 protection to the City of New Orleans.

P. Carey This is Pete Carey again. Was there a strenuous effort to get money for an increased level, Mr. Naomi?

A. Naomi Funds are being provided, and have been provided every year since the year 2000, when we initiated the study, and so work was progressing on the study. But these studies take a very long time, and we would have had to start work on Category 5 protection 20 or 25 years ago to have had in place to effectuate any differences in what happened with this storm. There would have been nothing we could have done with the existing project, I believe, that would have prevented inundation of the city with this type of storm. The project was not designed to protect it at that level.

G. Guliana This is Guy Guliana from *The Washington Post*. I'd like to go back to the timetable for de-watering the city. Could you please describe – General,

you said that you were working on a three-way process to stop it up, but there's no description of where you are in that process or what's going to be done or when or how. I guess Mr. Naomi or somebody in New Orleans, can you walk us through exactly what's going on?

C. Strock Yes. Let me turn this back to New Orleans. They were not on the line when I referred to them; we lost them.

Before we go to that, I would like to touch back to one other point that was asked. Three hundred miles of levee, no one point results in total failure. The flood protection in New Orleans and the vicinity, there's actually 13 –

(Audio interrupted.)

C. Strock There are three projects – West Bank, SELA – Southeast Louisiana – and Lake Pontchartrain protection. The system consists of 13 separate levee segments over 300 miles of levy, so this is not an all-or-nothing thing. We have recognized that we do need to segment the city and the surrounding parishes a different way, so that system was in place. This is not one single levee ringing the area. Now let me turn it over to New Orleans to

describe where we are in responding to the levee break in terms of stopping the flow of water. Go ahead, New Orleans.

W. Baumy — This is Walter Baumy, New Orleans District. The 17th canal contract is underway. We got a message sitting in this room that they're actually driving the first sheet of sheet piling. So we're pretty confident that's going to get closed hopefully today, and that will stop the water from coming in at 17th Street canal.

The second problem was the London Avenue canal, and we're working with local interests and several contractors simultaneously to get materials to that site so we can get that closure done. Once we seal those two places, we should seal water coming into the city.

A. Sullivan — This is Andy Sullivan with Reuters. I'm looking at one of the fact sheets for the Pontchartrain project, and it looks like London Avenue is one of the ones that needed work on it still; is that true?

A. Naomi — There were two projects left to do on London Avenue canal. Neither one of those projects had an impact on the flooding. The problem with the flooding here was a failure of a completed portion of that project. That

completed floodwall collapsed because it was overstressed; it wasn't designed to handle this type of surge. And those areas that we still need to work on were not a factor in that collapse.

A. Sullivan Was that area overstressed because of the other areas not being finished?

A. Naomi Would you repeat that, please?

A. Sullivan Was the area that collapsed, was that overstressed because other areas were not completed?

A. Naomi No; this is Al Naomi. No, that is not the case. Those areas were separate and away from this spot. This floodwall that collapsed runs a very long way along the canal; there's miles of this floodwall. And any individual panel could be subject to scour erosion because they weren't designed – I'm sure that these panels were under tremendous pressure from these event, pressure they weren't designed to handle, because this is far greater than what they were supposed to be withstanding.

I might also add one other thing: that over the last 20 years, those same floodwalls have done an excellent job in protecting the city. We've had

over $12 billion in savings on flood protection because those walls have done their job for the storms that they're designed to protect the city against. It's just that this particular storm was far greater than the design that we were able to construct, and so they weren't able to withstand this type of attack.

E. C. Reeves This is Emily Cheryl Reeves with *Chicago Sun Times*. Can you talk about, if you are able to close up the levee today and tomorrow, at what point – how long will it take to pump out the city, the water from the city; and at what point will rescue missions be done after that?

W. Baumy This is Walter Baumy from New Orleans, and I'll try to address the first part of your question. We're working very closely with New Orleans Sewage and Water Board and have identified pump stations that they have prioritized to get in service quickly; so we're working with them to try to get those stations dry so they can begin their operations of getting the equipment ready to pump. Depending on how many pumps they can get going and when they get going will determine how long it takes to get the water out; so we're moving fairly well along in that avenue, and we're –

E. C. Reeves Do you have any estimates? Are we talking three days, a week, a couple weeks?

W. Baumy No, because the first thing we need to do is we need to give them a dry place to work, and so that's undetermined. We have surveillance on the ground right now looking at that, so we can come up with a method to provide that; and then once that's done, they'll get in there and do their work.

A. Rosten Mr. Naomi, this is Aaron Rosten from NBC News. Were you yourself requesting more funds over the last few years for hurricane protection? And what were you requesting it for?

A. Naomi I myself am not requesting funds. The Corps requests funds of Congress. The funds that we requested for this project, for which I'm the project manager, are for certain specific construction contracts. Those specific construction contracts were at various locations around the New Orleans area. Most of them were for levee raisings, some in Jefferson Parish, some in St. Charles Parish, for levees that have settled and need to be raised. Those levees came through the event quite well.

These failures occurred in projects that were – contracts that were finished many years ago, have been inspected every year annually were inspected by the Corps, constantly inspected by local sponsors; and prior to this storm were in excellent condition, and had they been attacked by a Category 3 or less storm, we would not have had flooding. The local levee districts have won awards for their maintenance of these facilities; they've done an excellent job with the maintenance of these facilities, so I don't think there was any question that these facilities were in excellent shape before the storm. It's just that there was nothing that we could have done with these completed floodwalls to enable them to withstand this type of event, without going to a higher level of protection.

A. Rosten I'm sorry, which studies are you referring to?

A. Naomi I didn't hear your question, I'm sorry.

A. Rosten Which study were you referring to that led to these recommendations?

A. Naomi You're cutting off, I'm sorry.

A. Rosten Which study were you referring to?

A. Naomi What study?

A. Rosten Yes. I think you said a study in 2000, that started in 2000?

A. Naomi Oh, the study was – we were authorized by Congress in 1999, and we began a study in the year 2000, to provide Category 4 or 5 protection. That study is still underway. These studies take a very long time to produce. We have to look at things like environmental impacts, economics, the engineering design of the project itself. It's a very complicated and intense study, and we're not going to be finished with that study for a while yet because of the level of difficulty of doing this type of thing. I think it's certainly engineeringly feasible, but it takes quite a while, and there was nothing that we could have done to get this level of protection in place before this storm hit.

A. Rosten And as the project manager, were you dissatisfied or satisfied with the level of funding that the Corps was receiving?

A. Naomi Well, let's look at it this way: You have project managers all over the country and you always can use more money; but we work and we

proceed with the study as fast as we can. And even if they'd given me ten times more money, I could not have done anything to prevent this problem. Giving me ten times more money – money does not stop surges coming over levees. You have to have the study done and completed and authorized by Congress to get the Category 5 protection in place. That's years of effort. That could not have been done in the last three years; it just was not feasible. We do the best we can with the money we have, but even ten times more money, a hundred times more money would not get it done.

P. Carey Did you get the money as soon as you had requested it, as soon as the decision was made that a study like this needed to be done, or was there some delay?

A. Naomi Would you repeat that, please?

P. Carey Yes. This is Pete Carey with Knight-Ridder. I just wondered if there was some delay in obtaining the funding for this study, or if you got it immediately when you requested it and you got the amount you requested.

A. Naomi Okay. The study was authorized in 1999 by a committee of the Congress. We first received funds in 2000; that's normal process, because you get an authorization, then you get your funding. And we've gotten funding every year since then, so the study is proceeding. It's just the normal process that we go through.

P. Casey Okay, and you got the money you requested?

A. Naomi I got – sometimes I got money I requested, yes; but like I say, whether it's—you're talking about study money, and study money is just thousands of dollars. We're talking about needing millions of dollars to provide an actual construction project for Category 5 protection. So you proceed with the study as fast as you can with the resources you have, and then you can usually during the year obtain additional study funds if you need it by transferring from other studies; so just because you have appropriated, say, $200,000 for a study doesn't mean you can't get more money from other studies that are not proceeding. So there are ways to continue to get money for your study if you need it, and that's what we have done over the years.

C. Strock — This is General Strock. I think we need to move to a different subject, because—

J. Root — May I get a last question in, please? This is Justin Root with *Government Executive.* I'm looking at this June 6th article by Dionne Roberts that says, "A study to determine ways to protect the region from a Cat 5 hurricane has been shelved for now." Is that accurate?

A. Naomi — That is not correct. We have been working on that study since the year 2000 up to the day before the hurricane struck.

J. Root — So that article is inaccurate.

A. Naomi — Absolutely inaccurate.

D. Salvo — Dana Salvo with NBC News. Can you tell me, is there any other coastal city that has the levee and pump system that is similar to that of New Orleans?

C. Strock — There are flood protection projects on many cities. I don't know of any that have the same level of hazard as New Orleans, which is below sea

level. Miami certainly has a similar system. So we have systems like this around the country which rely on levees and pumping, yes.

S. Gilgoff This is Stan Gilgoff with *U.S. News and World Report*. I have a question for Al Naomi. Al, how much have you requested since 2000, annually, to fund the study, the feasibility study for Category 5 protection? And then how much have you received annually compared to what you requested?

A. Naomi I don't have those figures before me; they're probably in the office in New Orleans. We have requested funds – I think the Corps has requested on average about 100 to $200,000 a year, and Congress has – the House and Senate have provided varying amounts. But what we get is not necessarily what we spend. As I mentioned earlier, we have the ability to transfer funds into these studies, so say we get $200,000 for a study but I need more money; I will go to another study that has surplus funds and I transfer it in. So I have money to spend. So it's not a question of what they appropriate; it's what I spend.

S. Gilgoff I was under the impression that the feasibility study would cost around $10 million just to do the study itself. Is that correct or incorrect?

A. Naomi That's about 10 to $12 million for the feasibility study, and we anticipate that that –

(Parties speaking simultaneously.)

S. Gilgoff But $100,000 a year for a $10 million study –

A. Naomi -- in the year 2006 and continue on for about five years.

S. Gilgoff $100,000 to $200,000 a year, annually, for a study that's going to take 10 to $12 million would take around 50 to 100 years, right?

A. Naomi No, no, that's incorrect. What I said was, the feasibility study was scheduled to begin in fiscal year 2006, which is upcoming. The money that we were spending up to this point was to prepare what we call a reconnaissance report that gives us the federal permission basically to proceed with a feasibility study, and to prepare certain document that will get with our local sponsors, so they will fund part of that feasibility study; the cost-share agreement, our project manager plan. That is what we've been working on, and we have to do these things, by law, before we can begin the feasibility study.

S. Gilgoff So the official –

A. Naomi So we are proposing and had proposed proceeding with the feasibility study coming up in upcoming budget years. So these funds that I'm getting now were not related to the feasibility study specifically.

S. Gilgoff I see.

M Can I ask a question? Is it worth rebuilding that city; is it worth rebuilding the levee, or should you proceed with just filling in some of those areas with river mud and rebuilding on it, say, five years from now?

C. Strock This is General Strock; let me take that on. I think that's certainly a decision that is in the hands of the local officials working with the state about how to do that. That is certainly a discussion that will have to take place, about what level of reconstruction takes place in various parts of the city.

T. Micniowski General Strock, this is Tom Micniowski with *Engineering News Record.* I have a couple of quick questions. Could we get an estimate of the cost of

the short-term repairs on those two levees, number one? How much have you spent to date, how much you expect to? And then for General Strock, even a ballpark order of magnitude estimate of the cost of your portion of the levee repairs and longer-term de-watering.

C. Strock I would like to refer both of those down to the guys on the ground. I'm not sure that we could answer either one of those right now, because there are so many uncertainties and variables. What we are doing now is we are doing everything humanly possible to stop the flow of water, and it's going to cost what it's going to cost. When we get that stabilized and we start putting pumps on, our real effort will be trying to determine the level of resources necessary to bring the city back to life, and that's going to take a long time for us to figure out. But if the New Orleans team has a better answer for that, I'll let them take that.

W. Baumy This is Walter Baumy. Your answer was exactly right, sir; we have nothing to add to it.

A. Rosten Another question for Mr. Naomi, please. It's Aaron Rosten again of NBC. You are quoted in one article saying that in June, with the 2004 hurricane season starting, the Corps' project manager, Al Naomi, went to the East

Jefferson Levee Authority and essentially begged for $2 million for urgent work that Washington was unable to pay for. Could you explain what those circumstances were?

A. Naomi Well, I didn't say that. What happened was that the East Jefferson Levee District, which is one of our sponsors, offered to proceed with some work and provide funds for that work so that we could proceed with some levy work on the lakefront in Jefferson Parish. That work is underway as we speak, or up until this storm event; and that work, while not finished, certainly did not cause any flooding. It's underway. It was just to raise that levee about two or three feet. And we do this with our sponsors all the time; they share in the cost, they put money up. And on occasion if I'm running a little short of money, they put up some money and they proceed with the work. Other times when they're running short of money, I proceed with funding the project. We try to keep those projects and cost-share balanced; they're paying 30% of the cost.

So they have the ability to put up funds and construct projects just as we do. So we are doing this cooperative; we've done this for the last 40 years with these sponsors, and we will continue to do so. So I did not beg for money. What I asked them to do is if they wished to proceed with this

contract, that we could use their funds to do that. They agreed that that was a good idea and they proceeded with it.

A. Rosten Then, a follow-up on inspections, if you don't mind. The sections of the levee that failed, who inspected that the last time?

A. Naomi Those are inspected by both the Corps and the local levee district, together; and they also inspect it independently. We have an annual inspection with our commanding officer, our district engineer, and with all the appropriate design engineers; we go out there and we look and see if there's any problems. We did not see any problems that would cause us any concern with this levee system when we did the last inspection. In fact, the local sponsor has consistently won very high ratings and awards for the prosecution and maintenance of this project; and maintaining the project, the project was maintained as best as it could, at the highest level. It made no difference because the storm was far greater than what that project was designed to withstand.

C. Strock Al, let me add –

C. Rosenberg Carol Rosenberg from the *Miami Herald*. Can you tell us again, what are you going to do to stop up these breaches? And explain again what it will take to get the pumps pumping? And what happened to this plan for the Chinook and the five-ton sandbags?

C. Strock Let me start with the Chinook question here. What was recognized as we began to understand the level of the disaster here is that the first priority for these rotary-winged aircraft was to rescue people who were victims of the storm, and so our efforts to use the aviation to plug the gap was put at a lower priority, while we turned these vital assets over to saving lives. I believe that process is now – we're now trying to allocate more funds to this, or more aircraft to this effort, but let me turn it back to New Orleans for that.

Folks in New Orleans, let us know – give us a little more detail about what it is we're proposing in terms of stopping the flows at the various breach sites and what sorts of things we're doing there.

C. Rosenberg And that was the General answering?

C. Strock Yes. That's Carl Strock speaking there. Now, back to New Orleans.

W. Baumy This is Walter Baumy. 17th Street canal, we have a contractor on site driving sheet pile, and we should close that gap probably today. So we feel pretty confident on that one. The London Avenue gap, we have trouble with accessibility, and we're still working that. We're taking every avenue we can to cross the 17th Street – in front the 17th Street canal; that's on the lake side of the 17th Street – get onto the roadway and get equipment to that site.

At the same time, we've got marine plants; we're trying to get through the industrial canal lock system and the bridges that are associated with the industrial canal; and if we can get those bridges up, we can also access it in that manner. So we have two options there: If we haul stone material from 17th Street canal to London Avenue, we could place that quickly. If we get the bridges open first, then we take the marine plant, get it into the lake and come in front and either put concrete materials or sheet pile, whichever we can get first.

So both of those are going, and we have a third option simultaneous with local interests. They have located some material inside the system, and

we're trying to work with them to get that in place also. So there's three scenarios on that one canal.

S. Donnelley General Strock, it's Sally Donnelley from *Time Magazine*. Can we go back to air assets for a second?

C. Strock Yes, Sally.

S. Donnelley When did you start asking for Chinooks or any other kind of aircraft; and who decides the priority of rescue versus plugging a hole; and how much has that hurt your efforts, not being able to get the assets to plug the holes?

C. Strock Sally, I'm in Washington and working things towards the national level. Those kinds of decisions happen down on the ground, in conjunction with FEMA, who's really calling the shots and setting priorities here. But let me defer that to our folks – let me just explain real quick.

We are one of 16 emergency support functions that work for FEMA. There's healthcare and transportation, all sorts of things; so it's a joint decision made. But the incident coordinator on the ground makes those

kinds of calls. I'm not sure if my engineers know how that call is made, but I'll defer it back to them.

A. Revken It's Andy Revken from the *New York Times* again. Can you just give a little more detail on, again, the activities that are actually underway? The sheet pile, is that being driven at the entrance to the canal, not at the gap itself? And did they already start building a gravel – I thought there was some discussion of building a sort of access road to the actual breach in the side of the canal.

W. Baumy Okay, yes, we are closing the front of the canal. Instead of addressing the breach, we feel it's much quicker at this point to get the canal closed. In the early stages, we evaluated all avenues, looking at closing the canal versus closing the breach; so we were working those simultaneously. As the work developed, we were able to get equipment to the site so that we could close the breach.

Simultaneously – let me correct that. To close the canal from the lake. The sheet pile will close the canal to the lake. Simultaneous to that action, we've got a contractor bringing in rock, stone, building a road, and that's being done by a local interest with our help. So they're bringing in – the

contractor is bringing in stone and he's building a roadway back to the breach area so we could address that breach.

A. Revken Related to that, given that there was a sense of inevitability that Al and many other people have laid out over the years that a storm like this is a real thing – it's something that would happen in the city at some point – why was there not kind of a game plan for stanching breaches quickly? In other words, was there any – or was there? Was there any kind of game plan on a desk, sitting, waiting for the moment when New Orleans actually did get hit by a storm of this strength, and you started getting breaches, to act quickly to stanch them?

C. Strock This is General Strock; let me start on that anyway. We've got about five minutes left, unfortunately; but I'll try to keep things very brief. Throughout the country we have what we describe as potential catastrophic disasters that might occur. This is the lower Cascadius adduction zone in Seattle; the earthquakes in San Francisco and so on; the earthquakes in Missouri, New Madrid Falls; and a flood scenario in New Orleans is recognized as a potential catastrophic disaster.

We, working with FEMA, developed what we call Catastrophic Disaster Response Plans, and we exercise those plans; and we have done that with the City of New Orleans. But we certainly understood the potential of a Category 4 or 5 storm, and in fact that is the very reason why the local officials made the decision before landfall that the city must be evacuated, because we did understand in advance that this level of protection would likely be exceeded by Hurricane Katrina. So in my mind, what that says is we were working that, and we recognize the danger, and that's exactly why we urged the evacuation of the city.

A. Revken That didn't answer the question about stanching the gaps.

C. Strock I'm sorry, what gap are you speaking to?

A. Revken There was no plan to stanch the gaps in the canals? In other words, you didn't have a quick response option for stanching gaps when they were first reported?

C. Strock I'd have to – that's really the local levee and drainage districts –

A. Revken Can one of them answer that?

A. Naomi Let me just say this: We have 350 miles of levees. A failure could occur at any mile. You don't know what the mechanics of that failure will be in advance; it's very hard to predict it. If you had asked me before the storm where we would have a failure, I wouldn't begin to know that. There's no way to predict it. This floodwall that failed was in excellent condition, so why would we assume that this would fail and we'd have to have a pre-plan for it? There's no way to know these things in advance. All we have to do is have the personnel in place, get the people out of the cit and try and solve the problem, once we know where it is and we can take action against it.

G. Guliana This is Guy Guliana from *The Washington Post*. Is the city compartmentalized for floodwater removal, and are the pumps dry?

A. Naomi This is Al Naomi. Not all the pumps are dry. Different parts of the city – and when I say "the city," I'm talking about the metropolitan area – are dry now, okay? Jefferson Parish, the City of Kenner, the West Bank of the city are all dry and the pumps are functioning in those locations, for the most part; and there are some pumps, I believe, in other areas working, and the city is somewhat compartmentalized. There are different levee

systems that are all ringed, and they do not – if there's a problem in one, that doesn't necessarily mean you're going to have problems in others. So, yes; the city is compartmentalized. There are areas that can be protected when other areas are under water, if that's necessary.

G. Guliana I didn't catch the first part –

C. Gillette Excuse me –

G. Guliana -- are the pumps working, all of them?

C. Gillette Excuse me, gentlemen.

A. Naomi There's too many questions going on; I didn't hear any of that.

C. Gillette Okay, gentlemen, I'm sorry, we need to close the call off; it is 3 o'clock. We will have another call tomorrow afternoon. If you've got some follow-up questions –

M Could somebody just, each person spell their names, each one of these people who was talking?

M Al Naomi, and then there was Baumy.

A. Naomi Al Naomi is N-a-o-m-i.

W. Baumy Walter Baumy, B-a-u-m-y.

M Okay, title, Mr. Naomi?

C. Gillette Give him your title. Sir, we did this at the beginning of the call.

M Yes, I know; I came in late.

A. Naomi Okay, Al Naomi, Senior Project Manager, N-a-o-m-i.

C. Gillette Lieutenant General Carl Strock, the Chief of Engineers for the U.S. Army Corps of Engineers.

M Yes, I got him.

C. Gillette Again, folks, there will be another call tomorrow, and we will put out a message with the pass code and the information again tomorrow. Thank you very much.